REMARKS

The present Amendment amends claims 1-7. No claims are added or canceled. Therefore, the present application has pending claims 1-7.

Information Disclosure Statement

The Information Disclosure Statement (IDS) filed on July 14, 2003 is objected to by the Examiner for failing to comply with 37 C.F.R. §1.98(a)(1). Applicants submit herewith a corrected Form PTO-1449 for the IDS filed on July 14, 2003. Applicants respectfully request the Examiner to consider the IDS and to provide an initialed copy, acknowledging consideration of the references cited therein.

35 U.S.C. §102 Rejections

Claims 1-7 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,567,405 to Borella et al. ("Borella"). This rejection is traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1-7, are not taught or suggested by Borella, whether taken individually or in combination any of the other references of record. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims to more clearly describe features of the present invention. Specifically, amendments were made to the claims to more clearly recite that the present invention is directed to a communication method, a third information processing apparatus, a second information processing apparatus, and a first information processing apparatus as recited, for example, in independent claims 1-3, 6 and 7.

The present invention, as recited in claim 1, and as similarly recited in claims 2, 3, 6 and 7, provides a communication method in a communication system. The

communication system includes a first information processing apparatus and a second information processing apparatus, which communicate with each other over an Internet network. The method includes providing on the Internet network, a third information processing apparatus for pooling a plurality of global addresses to be temporarily used by the first information processing apparatus. The method also includes requesting, by the first information processing apparatus, the third information processing apparatus to set a first global address with encrypted communication, when the first information processing apparatus communicates with the second information processing apparatus. Also, the method includes setting, by the third information processing apparatus, the first global address according to the request. Furthermore, the method includes sending out, by the first information processing apparatus, a communication packet whose transmission-source address is the first global address and whose transmission-destination address is a second global address of the second information processing apparatus. The prior art does not disclose all of these features.

As described on page 6, lines 10-22 of the present specification, an object of the present invention is to provide a communication apparatus, method and system that use the global and fixedly-allocated IP addresses for identifying communication-performing concerned parties and the appliances corresponding thereto. Simultaneously, even if a third party intercepts a packet in the network, the apparatus, method and system of the present invention make it impossible for the third party to judge which concerned party or which corresponding appliance are performing communication with each other. Accordingly, an object of the present invention is to provide a communication method or an information processing

apparatus in which a privacy issue would not be raised even if an inherent address is given to each of the terminals.

As further described on page 23, line 26 to page 24, line 11 of the present specification, according to the present invention, despite the fact that the global and fixedly-allocated address of each information processing apparatus has been used as the transmission-destination address assigned to a communication packet on the network, even if a third party intercepts the communication packet on the network in order to know which information processing apparatus and which information processing apparatus are performing the communication, the third party finds it impossible to identify or to judge this situation. This condition results in an effect of making it possible to protect privacy in the communication and to enhance reliability in the communication.

More specifically, in the present invention, the real address of the first information processing apparatus is known only by the second information processing apparatus, except for the provisional address server (i.e., the third information processing apparatus). In this way, there is no danger of the real address being known by the third party with malice, a lack of privacy, network attack, etc.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record, particularly Borella, whether taken individually or in combination with any of the other references of record.

Borella teaches a method and protocol for distributed network address translation. However, there is no teaching or suggestion in Borella of the communication method, the third information processing apparatus, the second

information processing apparatus, or the first information processing apparatus as recited in claims 1-3, 6 and 7 of the present invention.

In contrast to the present invention, the object of the Borella is to reduce the burdens of address translation in a router. For example, as described in Borella in column 2, lines 36-37, "Thus, it is desirable to provide NAT without large computational burdens in a NAT router."

Borella discloses a system for Distributed Network Address Translation ("DNAT"). DNAT is used with small office/home office ("SOHO") networks or other legacy local networks that have multiple network devices using a common external network address to communicate with an external network. The system includes a port allocation protocol to allocate globally unique ports to network devices on a local network. Individual network devices on SOHO networks replace local source ports with the globally unique ports. The globally unique ports are used in a combination network address with a common external network address such as an Internet Protocol ("IP") address, to identify multiple network devices on a local network to an external network such as the Internet, an intranet, etc. DNAT helps overcome the large computation burdens encountered when network address translation is done by a router and helps extend the life of older versions IP using 32-bit addressing.

One feature of the present invention, as recited in claim 1, and as similarly recited in claims 2, 3, 6 and 7, includes providing, on the Internet network, a third information processing apparatus for pooling a plurality of global addresses to be temporarily used by the first information processing apparatus. Borella does not disclose this feature.

For example, Borella does not disclose pooling global addresses, and allocation of a global address to perform communications, as in the present

invention. As shown in Fig. 9 and as described in column 9, lines 17-37, Borella discloses a method 130 for allowing distributed network address translation. In this method of address translation, a first network device requests one or more globally unique ports from a second network device, where the first and second network devices are on a first computer network. The globally unique ports are used to replace default ports in protocol layers in layered protocol stack 42 on the first network device. In addition, the globally unique ports are used to create a combination network address including a globally unique port and a common external address to communicate with a second external computer network without address translation. This creation of a combination network address, which includes a globally unique port and a common external address, is quite different from the present invention.

By contrast, in the present invention, the third information processing apparatus pools global addresses, and allocates a global address to perform communications. Borella fails to teach or suggest pooling global addresses and the allocation of a global address, as in the present invention. Therefore, Borella fails to teach or suggest providing, on the Internet network, a third information processing apparatus for pooling a plurality of global addresses to be temporarily used by the first information processing apparatus, in the manner claimed.

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 2, 3, 6, and 7, includes requesting, by the first information processing apparatus, the third information processing apparatus to set a first global address with encrypted communication, when the first information processing apparatus communicates with the second information processing apparatus, and

then setting, by the third information processing apparatus, the global address according to the request. Borella does not disclose this feature.

For example, Borella does not disclose encryption of communications, as in the present invention. The second information processing apparatus 70 of the present invention includes a means for acquiring a true IP address of the first information processing apparatus 60 from a virtual address server 50, by using encrypted communications (*see, e.g.*, Fig. 9, Fig, 10 and the accompanying text). On the other hand, Borella fails to teach or suggest encryption of communications during delivery and receipt of such a true IP address.

In the present invention, although a confidential virtual address is used for communications between the information processing apparatuses, the apparatuses can know each other's true IP address. In this way, it is possible for the reception-side apparatus to refuse communications with an unintended party without an invasion of privacy.

A purpose of the present invention is that even in the event where unique IP addresses are given to all individual apparatuses using IPv6, a third party cannot know that the first and second information processing apparatuses performed communications with each other, where the first and second information processing apparatuses may have been involved in private communications (*see, e.g.*, page 6, liens 10-22 of the specification).

To accomplish the above-described purpose of the present invention, the virtual address server 50 is located – not at the local network where the first information processing apparatus 60 and the second information processing apparatus 70 are located – but at an external network accessible via the Internet (*see, e.g.*, Fig. 1). Furthermore, when the first information processing apparatus 60

rents a virtual address from the virtual address server 50, the communications between the first information processing apparatus 60 and the virtual address server 50 are encrypted (*see, e.g.*, Fig. 4 and the accompanying text).

Borella, on the other hand, does not provide a means for concealing from a third party that the router 26 performed communications with an external information processing apparatus, although which apparatus of SOHO LAN 12 performed communications with an external apparatus cannot be identified from the external network. As shown in Borella, the router 26 is placed at a business office, a house, or the like. Therefore, it would be impossible for Borella to apply the privacy protection of the present invention.

Yet another feature of the present invention, as recited in claim 1, and as similarly recited in claims 2, 3, 6, and 7, includes sending out, by the first information processing apparatus, a communication packet whose transmission-source address is said first global virtual address and whose transmission-destination address is a second global address of the second information processing apparatus. Borella does not disclose this feature, and in the Response to the Arguments (paragraph 9) of the Office Action, the Examiner has not provided Applicants for any reasons as to why similar arguments which were previously provided, were found to be unpersuasive.

As shown in Fig. 10, and as described in the accompanying text in column 10, lines 25-45, Borella discloses a method 140 for distributed network address translation. A request is sent from a first network device on a first computer network to a second network device on the first computer network. The request is for a second external network and includes a combination network address identifying the first network device on the first network. The combination network is constructed by

the method 130 (see previous discussion regarding Fig. 9), and includes a globally unique port and a common external address to identify the first computer network to the second external network. The second network device routes the request from the first computer network to the second external network. The second network device on the first computer network receives a response from the external second computer network at the external network address identifying the first network from the combination network address. In addition, the second network device on the first computer network routes the response to the first network device on the first computer network using the globally unique port from the combination network address. This is not the same as the present invention. More specifically, Borella's method for distributed network address translation, as shown in Fig. 10, does not include a step of sending out, by the first information processing apparatus, a communication packet whose transmission-source address is said first global address and whose transmission-destination address is said second global address of the second information processing apparatus, as in the present invention.

Therefore, Borella fails to teach or suggest "providing, on said Internet network, a third information processing apparatus for pooling a plurality of global addresses to be temporarily used by said first information processing apparatus" as recited in claim 1, and as similarly recited in claims 2, 3, 6, and 7.

Furthermore, Borella fails to teach or suggest "requesting, by said first information processing apparatus, said third information processing apparatus to set a first global address with encrypted communication, when said first information processing apparatus communicates with said second information processing apparatus" and "setting, by said third information processing apparatus, said global

address according to said request" as recited in claim 1, and as similarly recited in claims 2, 3, 6, and 7.

Further, Borella fails to teach or suggest "sending out, by said first information processing apparatus, a communication packet whose transmission-source address is said first global address and whose transmission-destination address is a second global address of said second information processing apparatus" as recited in claim 1, and as similarly recited in claims 2, 3, 6, and 7.

Therefore, Borella does not teach or suggest the features of the present invention, as recited in claims 1-7. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §102(e) rejection of claims 1-7 as being anticipated by Borella are respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 1-7.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-7 are in condition for allowance. Accordingly, early allowance of claims 1-7 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (referencing Attorney Docket No. 500.42924X00).

Respectfully submitted,

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